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[DIVISION OF ORNITHOLOGY AND MAMMALOLOGY,
CIRCULAR No. 1. SECOND EDITION.]

U. S. DEPARTMENT OF AGRICULTURE.

DIVISION OF ECONOMIC ORNITHOLOGY AND MAMMALOLOGY.

CIRCULAR ON THE FOOD-HABITS OF BIRDS.

It is well known that certain birds are directly destructive to farm crops, causing a loss of many thousands of dollars each year, and that others are highly beneficial, preying upon mice and insects which are injurious to vegetation, but the extent and significance of these effects, and their bearing on practical agriculture, is little understood. Moreover, great difference of opinion exists, particularly among farmers; as to whether certain well-known species are on the whole beneficial or injurious; and many kinds which are really of great practical value are killed whenever opportunity offers. For example, hawks and owls are almost universally regarded as detrimental, while as a matter of fact most of them never touch poultry but feed largely, and some almost exclusively, on mice and grasshoppers.

The wholesale slaughter of small birds has been known to be followed by serious increase of noxious insects; and invasions of insects which threatened to devastate large tracts of country have been cut nearly short by the timely services of some of our native birds.

In view of the above facts, and many others which might be cited, it is clear that a comprehensive, systematic investigation of the inter-relation of birds and agriculture will prove of enormous value to farmers and horticulturists. Such an investigation has been undertaken by the newly-established Division of Economic Ornithology of the Department of Agriculture, and the assistance and co-operation of persons interested are earnestly solicited.

The food of all birds consists either of animal matter or vegetable matter or both, and its consumption must be serviceable or prejudicial to the interests of mankind. Therefore, according to the food they eat, all birds may be classed under one of two headings—beneficial or injurious. Many species are both beneficial and injurious, and it is impossible to assign them to either category until the percentages of their food-elements have been positively determined and the sum of the good balanced against the sum of the evil.

In a very large proportion of our small birds the food varies considerably with the season, sometimes changing from vegetable to animal, or from injurious to beneficial. Furthermore, many birds feed their young upon substances which the adults rarely or never eat; and the young on leaving the nest sometimes greedily devour things which are discarded as they grow older. Hence it becomes necessary to ascertain the food of each species at different times of the year, and at different ages.

Information is desired on all questions relating to this inquiry, and special attention is invited to the following:

1. Has the Common Crow been observed to catch young chickens or to steal eggs?

2. Has it been observed to eat corn or other cereals in the field? If so, how long after planting, and how extensive was the injury done?

3. Has the Crow been observed to feed upon injurious insects? If so, what kinds of insects were thus destroyed, and to what extent?

4. Has the Crow Blackbird or Grackle been observed to carry off the young of the Robin or of other small birds, or to destroy their eggs?

5. When breeding near the house, has it been observed to drive off small birds (such as Robins, Bluebirds, etc.) which had previously made their abode on the premises?

6. Has it been observed to eat corn or other cereals in the field? If so how long after planting, and how extensive was the injury done?

7. Has the Crow Blackbird been observed to feed upon injurious insects? If so, what kinds of insects were thus destroyed, and to what extent?

8. What birds have been observed to feed upon or otherwise injure buds or foliage, and what plants or trees have been so injured?

9. What birds have been observed to feed extensively upon fruit? What kind or kinds of fruit have been most injured by each species, and how extensive have been the losses thus occasioned?

10. The Bobolink (Ricebird or May-bird of the Southern States) congregates in vast flocks during its migrations and commits extensive depredations in certain parts of the South. The Division will be glad to receive detailed accounts of these depredations from persons living in the affected districts, to whom a special circular will be sent on application.

11. What birds are considered to be injurious to grain crops, and what kinds are regarded as beneficial? On what facts are these opinions based?

12. What birds have been observed to feed upon injurious insects, and upon what kind or kinds does each bird feed?

13. Do Blackbirds (other than the Crow Blackbird already mentioned) commit serious depredations in your vicinity? If so, which of the several species of blackbirds are concerned, and what crops are affected?

14. Has any kind of bird been observed to feed upon the honey-bee? If so, what species, and how extensive has been the injury done?

When possible, the exact date should be given of all occurrences reported.

Persons willing to aid in the collection of birds' stomachs will be furnished with the necessary blanks and instructions.

Special circulars on the English Sparrow, and on the economic relations of mammals, will be furnished on application.

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Ornithologist.

HON. NORMAN J. COLMAN,

Commissioner of Agriculture.

WASHINGTON, D. C., OCTOBER 12, 1886.

